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10/676,067

10/02/2003

Yojiro Matsueda

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OLIFF & BERRIDGE, PLC
P.O. BOX 320850
ALEXANDRIA, VA 22320-4850

EXAMINER

DUONG, DIEU HIEN

ART UNIT

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2821

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|---------------------------------------|--|--|
| Office Action Summary | Application No. 10/676,067 | Applicant(s) MATSUEDA ET AL. | |
| | Examiner DIEU HIEN T. DUONG | Art Unit 2821 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/11/2008 has been entered.

In virtue of this request, claim 6 is canceled; claims 15-16 are newly added; thus, claims 1-5 and 7-16 are currently in the instant application.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "a plurality of electric power lines with different width", "at least two electric power lines of the plurality of electric power lines, at least one scan line of the plurality of scan lines, and at least one data line of the plurality of data lines being formed in at least one line forming region of the plurality of line forming regions", "both at least two electric power lines of the plurality of electric power lines and at least one scan line of the plurality of scan lines being formed in at least one line forming region of the plurality of line forming regions", and "both at least two electric power lines of the plurality of electric power lines and at least one data line of the plurality of data lines being formed in at least one line forming

region of the plurality of line forming regions” must be shown or the features canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 2-5 and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter

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which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Claim 2 has been amended to recite the feature “at least two electric power lines of the plurality of electric power lines, at least one scan line of the plurality of scan lines, and at least one data line of the plurality of data lines being formed in at least one line forming region of the plurality of line forming regions” which does not appear to be in the original filed specification. Thus, the recitation must be treated as "new matter".

Claim 3 has been added to recite the feature “both at least two electric power lines of the plurality of electric power lines and at least one scan line of the plurality of scan lines being formed in at least one line forming region of the plurality of line forming regions” which does not appear to be in the originally filed specification. Thus, the recitation must be treated as "new matter".

Claim 4 has been added to recite the feature “both at least two electric power lines of the plurality of electric power lines and at least one data line of the plurality of data lines being formed in at least one line forming region of the plurality of line forming regions” which does not appear to be in the originally filed specification. Thus, the recitation must be treated as "new matter".

For “new matters” in claims 2, 3 and 4, if applicant does not believe, an appropriate explanation is required to point out where the supports for these subject matters can be found in the original specification.

Claim 5 is rejected since it is dependent on claim 2.

Claim 12 is rejected for similar subject matter to claim 2.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 14:

Lines 1-2, the recitation “the combination of the plurality of lines” is not clear. It is not clear what “the plurality of lines” refers to. Does it refer to “the plurality of electric power lines? If so, it should be “the combination of the plurality of said electric power lines.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 7-11 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanada (US 2001/0048106 A1) in view of Yamazaki et al. (US 6,825,820 B2 of record), hereinafter “Yamazaki”.

Regarding claim 1, Tanada discloses, in Figures 5 and 6A, an electro-optical device, comprising an electric power supply circuit; a plurality of pixels, disposed in the form of a matrix, including electro-optical devices driven by receiving electric power from

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the electric power supply circuit, the plurality of pixels making up a plurality of pixel groups formed of a series of pixels arrayed in at least one direction of the row direction and the column direction, a plurality of line forming regions being formed between adjacent pixel groups of the plurality of pixel groups, and each of the line forming regions being formed with generally the same width; a plurality of electric power lines (640, 650) to supply driving voltage to the electro-optical devices; and at least two electric power lines (640, 650) of the plurality of electric power lines being formed in at least one line forming region of the plurality of line forming regions.

Tanada does not disclose the electric power lines with different widths.

Yamazaki discloses, in Figure 1B and page 6, lines 5-15, electric power lines with different widths.

It would have thus been obvious to one having ordinary skill in the art at the time the invention was made to include the electric power lines with different widths of Yamazaki in the display device of Tanada to achieve the claimed invention, doing so would improve the brightness uniformity of the display device (col. 3, lines 62-67).

Regarding claim 7, as applied to claim 1, Tanada/Yamazaki disclose, (see Tanada, Figures 5 and 6A), the electro-optical device being a light-emission device and the electric power lines being formed with different widths corresponding to the emission light color of said light-emission device.

Regarding claim 8, as applied to claim 7, Tanada/ Yamazaki disclose, (see Tanada, Figures 5 and 6A), the color of the light which is to be emitted being at least one of red, green, and blue.

Regarding claim 9, as applied to claim 1, Tanada/Yamazaki disclose, (Tanada, Figures 5 and 6A), the electro-optical device being an electro-luminescence device.

Regarding claim 10, Tanada/Yamazaki disclose, (Tanada, Figure 23), a electronic apparatus comprising the electro-optical device according to claim 1.

Claim 11 is rejected for similar subject matter to claim 1.

Regarding claim 13, as applied to claim 1, Tanada/Yamazaki disclose, (see Tanada, Figures 5 and 6A), each of the line forming regions being formed in at least one direction of the row direction and the column direction with generally the same pixel pitch.

Regarding claim 14, Tanada/Yamazaki disclose, (see Tanada, Figures 5 and 6A), the combination of the plurality lines being disposed periodically and repeatedly in at least one direction of the row direction and the column direction.

Regarding claim 15, as applied to claim 1, Tanada/Yamazaki disclose, (Tanada, Figures 2B, 5 and 6A), wherein a sum of widths of a plurality of lines including at least one electric power line formed in one line forming region is approximately the same as that the sum of widths of a plurality of lines formed in another line forming region.

Claim 16 is rejected for similar subject matter to claim 15.

9. Claims 2, 4-5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komiya et al. (US 2003/0076046 A1 of record) in view of Yamazaki et al. (US 6, 825,820 B2 of record), hereinafter "Komiya" and "Yamazaki".

Regarding claim 2, Komiya discloses, in Figures 4-5 and page 5, par. [0067], an electro-optical device comprising a plurality of scan lines (G); a plurality of data lines

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(D); a plurality of pixels (Fig. 5), disposed at portions corresponding to intersections of the scan lines (G) and the data lines (D), including electro-optical devices; and a plurality of electric power lines (183) to supply driving voltage to the electro-optical devices; the plurality of pixels making up a plurality of pixel groups formed of a series of pixels arrayed in at least one direction of the row direction and the column direction (Fig. 5), a plurality of line forming regions (183, D) being formed between adjacent pixel groups of said plurality of pixel groups, and at least two lines (183, D) selected from at least one electric power line of the plurality of electric power lines (183), at least one scan line of the plurality of scan lines, and at least one data line (D) of the plurality of data lines (D), being formed in at least one line forming region of the plurality of line forming regions; and a sum of widths (183, D) of a plurality of lines including at least one electric power line (183) formed in one line forming region is approximately the same as that of a sum of widths of a plurality of lines formed in another line forming region (183, D).

Komiya does not disclose electric power lines with different widths.

Yamazaki discloses, in Figure 1B and page 6, lines 5-15, electric power lines with different widths.

It would have thus been obvious to one having ordinary skill in the art at the time the invention was made to include the electric power lines with different widths of Yamazaki in the display device of Komiya to achieve the claimed invention, doing so would improve the brightness uniformity of the display device (col. 3, lines 62-67).

Claim 4 is rejected for similar subject matter to claim 2.

Regarding claim 5, as applied to claim 1, Komiya/Yamazaki disclose, the line forming regions being formed with generally the same width (see Komiya, lines 7-9 of par. [0076]).

Claim 12 is rejected for similar subject matter to claim 2.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nara et al. (US 6,633,135 B2 of record) in view of Yamazaki et al. (US 6,825,820 B2 of record), hereinafter "Nara" and "Yamazaki".

Regarding claim 3, Nara discloses, in Figure 1, an electro-optical device comprising a plurality of scan lines (VG); a plurality of data lines (VD); a plurality of pixels (11), disposed at portions corresponding to intersections of the scan lines (VG) and data lines (VD) including electro-optical devices; and a plurality of electrical power lines (VLC) to supply driving voltage to the electro-devices; the plurality of pixels (11) making up a plurality of pixel groups formed of a series of pixels arrayed in at least one direction of the row direction and the column direction, a plurality of line forming regions (VG, VLC) being formed between adjacent pixel groups of the plurality of pixel groups, and both at least one electric power line (VLC) of the plurality of electric power lines and at least one scan line (VG) of the plurality of scan lines being formed in at least one line forming region of the plurality of line forming regions.

Nara does not disclose the electric power lines with different widths.

Yamazaki discloses, in Figure 1B and page 6, lines 5-15, electric power lines with different widths.

It would have thus been obvious to one having ordinary skill in the art at the time the invention was made to include the electric power lines with different widths of Yamazaki in the display device of Komiya to achieve the claimed invention, doing so would improve the brightness uniformity of the display device (col. 3, lines 62-67).

Response to Arguments

11. Applicant's arguments with respect to claims 1, 7-11 and 13-16 filed on 02/11/2008 have been considered.

Applicant argued that:

The support for the amended claims and the newly added claims 1-5 and 7-15 can be found, for example in Fig. 3, paragraphs [0030] and [0031] of the specification.

Examiner respectfully disagrees.

The only support for the newly added limitations of the claims 1, 7-11 and 13-16 can be found (for example, at least two electric power lines selected from the plurality of electric power lines with different widths are formed in at least one line forming region). Therefore, applicant's arguments with respect to claims 1, 7-11 and 13-16 are moot in view of the new ground(s) of rejection.

No support can be found for the newly added limitations of the claims 2-5 and 12. Therefore, these limitations are treated as new subject matter and have been rejected under 35 USC 112, first paragraph as discussed above.

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIEU HIEN T. DUONG whose telephone number is (571)272-8980. The examiner can normally be reached on Monday - Friday, from 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on 571-272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

02/21/08
DD

/Trinh Vo Dinh/
Primary Examiner, Art Unit 2821
March 14, 2008